

Chemistry 636 – Instrumental Analysis Laboratory Spring 2007

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Class Format

This course will be conducted in a case study format. The class will be divided into working groups and assigned to solve a problem requiring instrumental analysis. Each group will act as the Analytical Department of a larger entity, such as a corporation, government agency, or consulting firm. The Group Leaders will serve as the Directors of Analytical Chemistry for each group. The groups will work with their Director to solve a problem assigned to them. They will have weekly meetings to discuss progress and make plans. In addition, the groups will make several written and oral reports to their management team which consist of the group leaders and instructor.

Class Schedule

Each group must arrange a schedule in conjunction with their Group Leader. The Instrumental Laboratory will be available for use during the scheduled lab or at the group's convenience with the consent of the Group Leader. However, time on individual instruments must be reserved in advance to guarantee availability. The door to the Instructional Instrumentation Laboratory is password protected. You will be held responsible for any damage or loss that occurs while you are in the laboratory! It is your responsibility to report to the Instructor or Group Leaders the presence of any unauthorized individuals in the laboratory.

Grades

Grades will be a combination of individual and group performance with 50% weight allocated for each. Each written and oral report will be graded to arrive at a project grade. Each individual will receive a grade from his or her Group Leader. Written and oral reports will be graded by management (i.e. the instructor and Group Leader). Each presentation will be given equal weight in the project grade. The individual and project team grade will be combined to arrive at the final grade for each student. Short weekly reports are required of each student.

Class Timeline

Week of Jan. 28	Introduction to the course. Lab tour. Students will fill out job applications and be interviewed by group leaders.
Weeks of Feb. 4 – Feb. 25	Students will be hired into a company. Groups will do background research on their problem and prepare a plan of study. Tutorials on several instruments will be conducted during lab periods.
March 4th and 6th	A written ‘Plan of Study’ report from each group is due to management by 5:00pm. Individual oral reports will be presented during the laboratory period.
Weeks of March 10 – March 31	Work on problem.
April 1st and 3rd	A written ‘Progress Report’ is due to management by 5:00 pm. Oral reports will be presented during the laboratory period. Individual evaluations by each member of group will be collected.
Weeks of April 16 th – April 30 th	Complete work and wrap up project.
April 29th and May 1st	Abstracts are due for the “Eighth International Symposium on Instrumental Analysis Laboratory”. Oral reports will be presented during the laboratory period. Individual evaluations by each member of group will be collected.
May 8 th	Attend the “Nineth International Symposium on Instrumental Analysis Laboratory” in Lawrence, Kansas. Each group will give a poster and an oral presentation of their research. Final group reports are due.

Professional Ethics

As this Course is intended to prepare you to function as a professional scientist, proper professional conduct is expected. In this regard your attention is called to the definition of academic misconduct as described in the University Senate regulations:

Academic misconduct by a student shall include, but not be limited to, disruption of classes, giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports, or other assignments, or knowingly misrepresenting the source of any academic work.

Any student in this course who has a disability that may prevent him/her from fully demonstrating his/her abilities should contact the Instructor personally as soon as possible so that accommodations necessary to ensure full participation and facilitate the educational opportunity can be established.